

Base map of No. 3 adit from transit survey by U. S. Tin Corp. Base maps of raises by tape and Brunton compass survey by C. L. Sainsbury and J. R. Houston

Geology of new adit from collar to No. 2 shaft by J. R. Houston; geology from new shaft to survey spad 40 by J. R. Houston and C. L. Sainsbury; geology of old adit to caved part and of new adit beyond survey station 40 by C. L. Sainsbury. Geology of section 1, 2, 3, modified from U. S. Tin Corp. maps using information of J. R. Houston, 1953; geology of sections 4, 5, 6 by C. L. Sainsbury, 1955

## GEOLOGIC MAP OF NO. 3 ADIT LEVEL, AND GEOLOGIC SECTIONS IN RAISES ABOVE LEVEL, LOST RIVER MINE, ALASKA

40 0 40 80 120 160 200 FEET 

## EXPLANATION

Greisen or greisenized rhyolite dike rock

Hard, gray to white; contains abundant sulfide minerals and fluorite and lesser amounts of cassiterite and wolframite

Kaolinized greisen or greisenized rhyolite dike rock

Soft, gray, green to purple. Pseudoporphyritic texture caused by kaolinite patches. Some facies contain high percentage of pink mica and fluorite; unit generally contains some sulfide minerals, cassiterite and minor amounts of wolframite

Clay derived from greisen or greisenized rhyolite dike rock

Soft, white to tan. Iron sulfide minerals mostly leached, but unit locally contains arsenopyrite, ferroan sphalerite, some cassiterite, fluorite, specks of limonite and of wolframite

Dike rock; lithology unknown because of lack of exposures or lack of detailed

Altered rhyolite

Marmarized limestone

Cut by many thin veinlets containing one or more of following: fluorite, sulfide minerals, silicate minerals, carbonate minerals, cassiterite, and wolframite. Large dots indicate noticeable coarsely crystalline carbonate minerals

Intensely fluoritized tactite or limestone Generally brown to purple. Spacing of x's denotes relative amount of fluorite; dashes indicate shearing

Limestone breccia

Origin unknown. x's indicate noticeable fluorite; large dots denote appreciable coarsely crystalline carbonate minerals; dashes denote appreciable shearing

Sheared limestone or tactite Firm to soft; consists of clay, coarsely crystalline carbonates (large dots), and noticeable fluorite (x's). Locally contains limestone breccia

> 0000 Fault breccia and gouge, showing dip of fault ----

Altered rhyolite dike rock Contains more than the usual amount of thin discontinuous sulfide-bearing veinlets generally trending along dike

> Clay alteration Spacing of dots indicates degree

Contact showing dip Dashed where gradational or inferred

¥50 — Fault, showing dip Dashed where inferred. May grade to zone of discontinuous parallel shears

> 200000 Fault with brecciated walls

Strike and dip of beds

Horizontal bedding

Strike and dip of joints

90

Strike of vertical joint 

Discrete zone of closely spaced veinlets containing cassiterite Clay, fluorite 170 190 1/4-1 in.

Showing dip, average thickness, and major constituents as determined megascopically; joint symbol indicates veinlet formed along joint; strike of vertical veinlet

Head of two-compartment vertical shaft

70 Head of two-compartment inclined shaft, showing inclination

Foot of raise

Head of raise or winze \_\_\_\_\_\_\_\_\_\_ Mine workings, dashed where approximate

> \_\_\_\_\_ Caved workings

Window to dike from raise

Line of geologic section

2000000 00000000 Caved rubble

U. S. Tin Corp. survey coordinate